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EXAMINER	
COLBERT, ELLA	

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/416,414	BHANDARI ET AL.	
	Examiner	Art Unit	
	Ella Colbert	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-96* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-96* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 29-96 are pending. Claims 29, 30, 38, 50, 54, 57-59, 63, 66, 67, 76, 93, 94, and 96 have been amended in this communication filed 10/12/04 entered as Response.

2. The 35 USC 112 Second Paragraph Rejection for claims 30, 33, 35, 38, 58, 63, 66, 67, 76, 94, and 96 has been overcome and the 35 USC 112 second paragraph rejection for claims 33, 35, 38, 58, 63, 66, 67, 76, and 96 is hereby withdrawn. The 35 USC 112 second paragraph rejection still remains for claims 36, 47, and 48 as set forth here below.

3. The claim objection to claims 38, 50, 51, 54, 57, 59, 77, and 93 has been overcome by the amendment to claims 38, 50, 51, 54, 57, 59, 77, and 93 and is hereby withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 36, 47, and 48, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 35, 36, 38, 47, 48, 63, 64, and 66 are conditional statements. It is not understood in claim 33 what step or steps would be performed "if it is determined that more than one query in the set of related queries has the greatest-valued result." Do Applicants' mean a list of queries would be generated ..."? Claims 47 and 48 have a similar issue.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 29-40, 48-51, 54-68, 76, 77, and 93-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 6,044,366) Graffe et al, hereafter Graffe in view of Adar et al, hereafter Adar.

With respect to claim 29, Graffe teaches, receiving at the computer a user query consisting of at least one computation and an attribute-value list having one or more elements, each element being associated with an attribute having a value assigned by a user or a user process (col. 6, lines 34-55 and col. 9, lines 8-55); determining queries in a plurality of queries having the at least one computation and sharing one or more elements in common with the user query to provide a set of related queries (col. 9, Table 7 and Table 8- plurality of queries and computation); and computing a result of the at least one computation for the attribute-value list associated with each query in the set of related queries (col. 11, lines 1-34). Graffe failed to teach, comparing the results associated with the set of related queries to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result.

Adar teaches, comparing the results associated with the set of related queries to determine one or more queries (col. 2, lines 47-65 and col. 9, lines 7-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to compare the results associated with the set of related queries to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result and to modify in Graffe because such a modification would allow Graffe to make a comparison and to perform a computation to arrive at either a greatest-value or a least value attribute.

With respect to claims 30 and 58, Graffe teaches, selecting the at least one computation from a plurality of computations in response to a user input or a user input process (col. 3, lines 1-25); selecting one or more attributes from a plurality of attributes in response to the user input or user input process (col. 5, lines 47-66 and col. 6, lines 1-32); and selecting a value for each attribute selected in response to the user input or user input process to form an element (col. 8, lines 1-16 and Table 6).

With respect to claims 31 and 59, Graffe teaches, wherein the at least one computation defines a relationship between the plurality of queries and a plurality of results (col. 8, lines 25-53 and col. 9, lines 36-62).

With respect to claims 32 and 60, Graffe teaches, wherein the results associated with the related queries are numeric results (col. 9, lines 36-62).

With respect to claims 33 and 61, Graffe teaches, comprising the step of selecting one query as the query having the a maximum result if it is determined that more than one query in the set of related queries has the greatest-valued result (col. 15, lines 12-41).

With respect to claims 34 and 62, Graffe teaches, the step of generating a list of queries having the at least one computation, each query being associated with an attribute-value list having the greatest-valued result of all queries in the plurality sharing one or more elements in common with a preceding query or succeeding query in the list of queries (col. 9, lines 8-58).

With respect to claims 35, 37, & 63, Graffe teaches, the list of queries yields a non-decreasing succession of numeric results and wherein the step of generating a list

comprises the steps of: (a) adding the query in the set of related queries having the greatest-valued result as a last query in the list of queries (col. 10, lines 30-65 28); and (b) determining queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said last query to provide a set of queries related to said last query (col. 11, lines 1-63); (f) adding the query having the greatest-valued result if to the end of said list of queries as a new last query if it is determined that said new last query is not equivalent to said last query (col. 10, lines 30-65, col. 14, lines 43-66, and col. 15, lines 1-30); and (g) repeating steps (b) through (f) until there is no query in the plurality of queries having a result greater than the last query and sharing one or more elements in common with the last query (col. 10, lines 30-65, col. 11, lines 1-63, col. 14, lines 43-66, and col. 15, lines 1-30).

With respect to claim 37, Graffe teaches, the step of generating a list of queries having at least one computation, each query being associated with an attribute-valued string having the least-valued result of all queries in said plurality of queries sharing one or more elements in common with a preceding query or a succeeding query in said list of queries (col. 8, lines 58-67).

These claims dependent claims are also rejected for the similar rationale given for claims 29 & 33.

With respect to claims 36 and 64, Graffe teaches, comprising the step of selecting one query as the query having the least-valued result if it is determined that more than one query in the set of related queries has the least valued result (col. 3, lines 42-66 and col. 8, lines 17-29).

These dependent claims are also rejected for the similar rational as given above for claim 33.

With respect to claims 37 and 65, these dependent claims are rejected for the similar rationale as given above for claim 35.

With respect to claims 38, 54, 66, 93, & 96, these claims are rejected for the similar rationale given for claims 29 and 35.

With respect to claims 39, 55, 67, and 94, these claims are rejected for the similar rationale as given above for claims 29 and 35.

With respect to claims 40, 56, 68, and 95, Graffe teaches, wherein the step (d) further comprises the steps of determining whether the first query has the greatest-valued result or the least-valued result (col. 2, lines 47-65 and col. 9, lines 7-17). A query is known in the art for specifying the characteristics (criteria) used to guide the computer to the required information.

With respect to claim 48, this dependent claim is rejected for the similar rationale as given above for claims 35, 38, and 39.

With respect to claim 49, this dependent claim is rejected for the similar rationale as given above for claims 35-37.

With respect to claims 50 and 76, this dependent claim is rejected for the similar rationale as given above for claims 29 and 38.

With respect to claims 51 and 77, this dependent claim is rejected for the similar rationale as given above for claim 31.

With respect to claims 54, 93, and 96, this dependent claim is rejected for the similar rationale as given above for claims 29, 35, and 39.

With respect to claim 57, Graffe teaches, a device for receiving a user query, a device for determining a computing device, and a comparator for comparing (col., 12, lines 4-67 and col. 13, lines 1-42). This independent claim is rejected for the similar rationale as given above for claim 29.

9. Claims 41-47, 52-53, and 69-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graffe et al, hereafter Graffe in view of Adar et al, here after Adar and further in view of (US 4,490,811) Yianilos et al, hereafter Yianilos.

With respect to claims 41 and 69, Graffe and Adar failed to teach, the step of generating pre-computed greatest-valued and pre-computed least-valued lists by pre-determining for each query in the plurality of queries whether each query has a greatest-valued result or a least-valued result for all queries in the plurality of queries having at least one computation and sharing one or more elements in common with each query.

Yianilos teaches, the step of generating pre-computed greatest-valued and pre-computed least-valued lists by pre-determining for each query in the plurality of queries whether each query has a greatest-valued result or a least-valued result for all queries in the plurality of queries having at least one computation and sharing one or more elements in common with each query (col. 19, lines 24-67 and col. 20, lines 1-22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to generate pre-computed greatest-valued and pre-computed least-valued

lists by pre-determining for each query in the plurality of queries whether each query has a greatest-valued result or a least-valued result for all queries in the plurality of queries having at least one computation and sharing one or more elements in common with each query and to modify in Graffe because such a modification would allow Graffe to rank the list to arrive at the greatest-valued and least-valued result of the queries.

With respect to claims 42, 70, & 75, Graffe and Adar failed to teach, determining whether any query in the set of related queries is in the pre-computed greatest-valued list to provide a set of max queries and determining whether any query in the set of related queries is in the pre-computed least –valued list to provide a set of min queries.

Yianilos teaches, determining whether any query in the set of related queries is in the pre-computed greatest-valued list to provide a set of max queries (col. 5, lines 1-26) and determining whether any query in the set of related queries is in the pre-computed least –valued list to provide a set of min queries (col. 5, lines 29-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to determine whether any query in the set of related queries is in the pre-computed greatest-valued list to provide a set of max queries and determining whether any query in the set of related queries is in the pre-computed least –valued list to provide a set of min queries and to modify in Graffe because such a modification would allow Graffe to have a ranked list of the most similar indicia and to compare similarity values to arrive at the greatest-valued list and least-valued list to result in a set of min queries.

With respect to claims 43 and 71, Graffe and Adar failed to teach, the step of displaying the user query and the result of the user query along with the greatest-valued result and one or more queries having the greatest-valued result.

Yianilos teaches, the step of displaying the user query and the result of the user query along with the greatest-valued result and one or more queries having the greatest-valued result (col. 19, lines 29-68 and col. 20, lines 1-22 (display) "appear". It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a step of displaying the user query and the result of the user query along with the greatest-valued result and one or more queries having the greatest-valued result and to modify in Graffe because such a modification would allow Graffe to have the query ranked according to the greatest-valued result and to have the highest ranking records appear (displayed).

With respect to claims 44 and 72, Graffe and Adar failed to teach, the step of displaying further displays the least-valued result and one or more queries having the least-valued result.

Yianilos teaches, the step of displaying further displays the least-valued result and one or more queries having the least-valued result (col. 23, lines 24-50 (display) "observe." It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the step of displaying further displays the least-valued result and one or more queries having the least-valued result and to modify in Graffe because such a modification would allow Graffe to process one query at the time and

the value of each letter in a fixed order that is before the user to arrive at a least-valued result.

With respect to claims 45 and 73, Graffe and Adar failed to teach, the step of displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in the list.

Yianilos teaches, the step of displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in the list (col. 2, lines 31-38 and col. 27, lines 32-55). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the step of displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in the list and to modify in Graffe because such a modification would allow Graffe to arrive at a result of the greatest-value in the list in the queries.

With respect to claims 46 and 74, these dependent claims are rejected for the similar rationale given for claims 44 and 45.

With respect to claim 47, this dependent claim is rejected for the similar rationale given for claims 43 and 45.

With respect to claims 52 and 78, these dependent claims are rejected for the similar rationale given for claims 42, 43, & 45.

With respect to claims 53 and 79, these dependent claims are rejected for the similar rationale given for claims 42 & 44.

10. Claims 79-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graffe et al, hereafter Graffe in view of (US 5,802,515) Adar et al, hereafter Adar.

With respect to claim 79, Graffe failed to teach, the step of displaying displays each query and the corresponding least-valued result in the set of min queries.

Adar teaches, the step of displaying displays each query and the corresponding least-valued result in the set of min queries (col. 3, lines 51-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a step or displaying displays for each query and the corresponding least-valued result in the set of min queries and to modify in Graffe because such a modification would allow Graffe to compute a rank value for each of the documents in the set of queries, the number of queries and the lowest rank value to arrive at a result.

With respect to claims 80, 81, 82, 84, & 86-92, Graffe failed to teach, a computing device operable to compute results for sports data, call center data, customer relationship management data, multimedia data, tennis data, soccer data, golf data, football data, baseball data, and cricket data. Adar teaches, a computing device operable to compute results for sports data, call center data, customer relationship management data, multimedia data, tennis data, soccer data, golf data, football data, baseball data, and cricket data (col. 4, lines 58-65 and col. 9, lines 7-17). Sports data, call center data, customer relationship management data, multimedia data, tennis data, soccer data, golf data, football data, baseball data, and cricket data are merely attributes to obtain a result of a computation.

With respect to claim 83, Graffe failed to teach, the computing device is operable to compute results for banking data. Adar teaches, the computing device is operable to compute results for banking data (col. 1, lines 26-30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a computing device operable to compute results for banking data and to modify in Graffe because such a modification would allow Graffe to retrieve large amounts of computed information from databases.

With respect to claim 85, Graffe failed to teach, the computing device is operable to compute results for textual data. Adar teaches, the computing device is operable to compute results for textual data (col. 5, lines 2-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a computing device operable to compute results for textual data and to modify in Graffe because such a modification would allow Graffe to provide text to a text string processor from a preexisting source with the text string processor receiving the input text string.

Response to Arguments

11. Applicant's arguments filed 10/12/04 have been fully considered but they are not persuasive.

Issue no. 1: Applicants' argue Yianilos et al does not teach or suggest "determining queries in a plurality of queries having at least one computation and sharing one or more elements in common with the user query to provide a set of related queries and Adar et al independently or in combination does not teach or suggest determining related queries sharing one or more elements in common with the user

query as recited in independent claim 29 and similarly in independent claims 50, 54, 57, 76, 93, and 96 has been considered but is not persuasive. Response: Yianilos et al was not used to reject the claim limitation "determining queries in a plurality of queries having at least one computation and sharing one or more elements in common with the user query to provide a set of related queries" because Graffe was used to reject this claim limitation. Therefore this argument is considered moot since Graffe and Adar were used to reject claim 29 and 50, 54, 57, 76, 93, and 96.

Issue no. 2: Applicants' argue: Yianilos et al or Adar et al does not teach or suggest pre-determining a set of computationally related queries and pre-determining queries having the greatest-valued or least-valued result from the set of computationally related queries, as called for in claims 50 and 76 has been considered but is not persuasive. Response: This argument is considered moot. Yianilos or Adar was not used to reject claims 50 and 76 because Graffe was used to reject claims 50 and 76.

Conclusion: Applicants' are respectfully requested to point out to the Examiner and to clearly and distinctly claim in the claim language the inventive concept in the independent claims in an Official response to this Office action. The claim language is very unclear in claims 29, 50, 57, 62, 65, 69, 70, 93, and 96.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E. Colbert
December 18, 2004